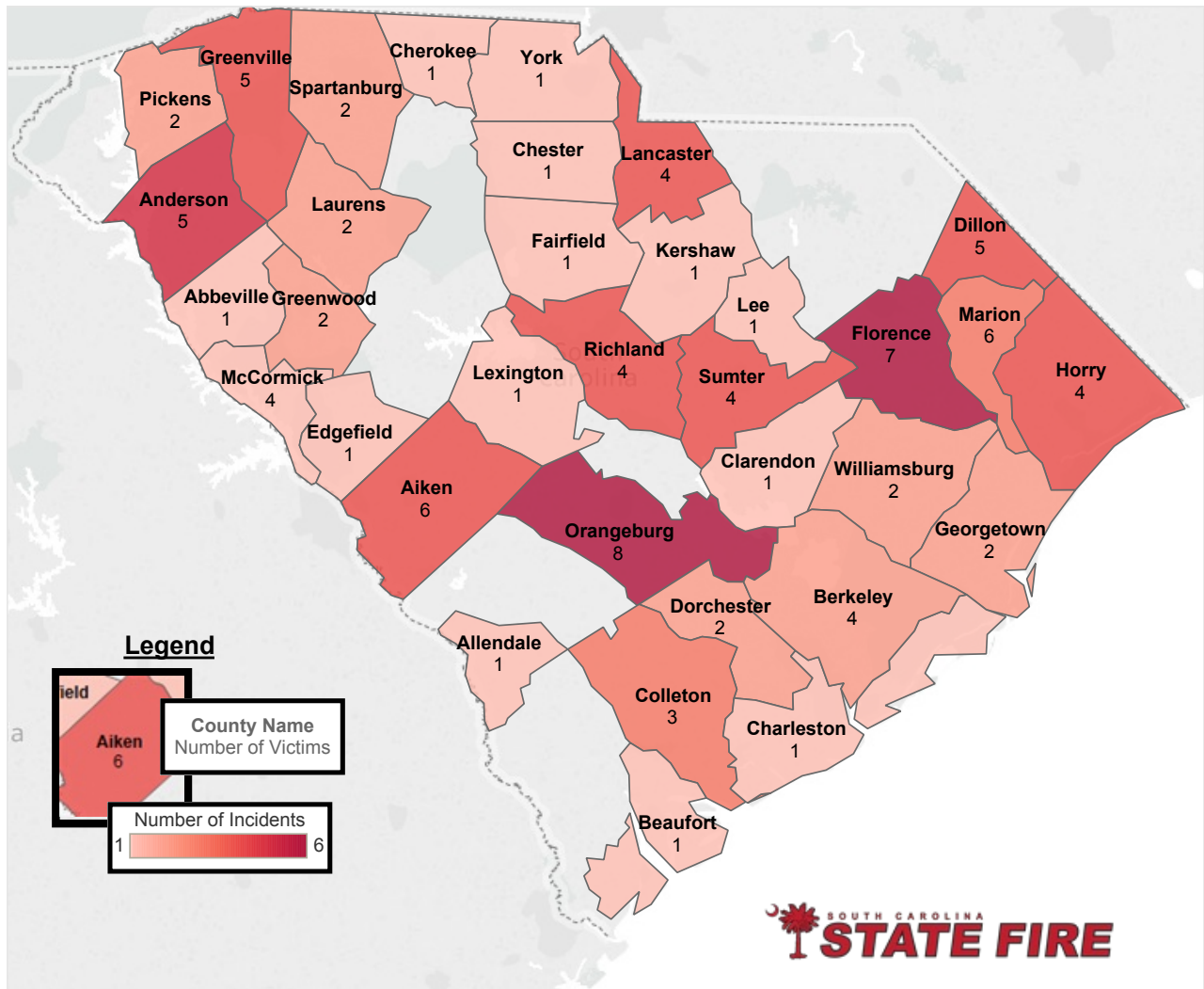


2018 Fire Fatality Summary Report

South Carolina Office of State Fire Marshal
Community Loss Education and Response (CLEAR) Team



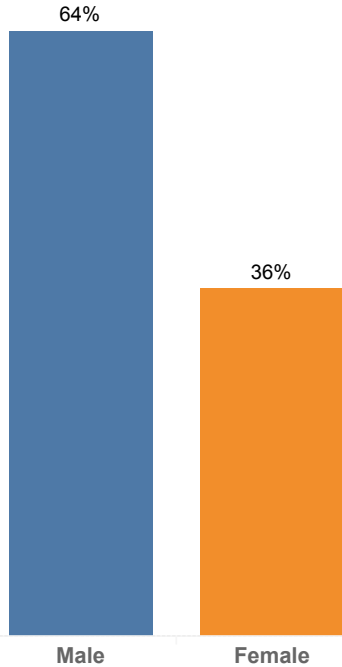
These findings are made possible by the research efforts of the CLEAR Team. In some cases, the percentages may not add up to 100% due to rounding. If you would like more information or outreach ideas based on the findings, please call South Carolina State Fire at (803) 896-9895.

This report version was last updated on April 5, 2019.

Fire Fatality Victim Profile

In 2018, there were 96 deaths from 81 incidents. The victims of fatal fires were reported in 34 of 46 counties, with the most incidents happening in Florence, Orangeburg, and Anderson counties. Aiken, Dillon, and Marion counties had a fewer number of incidents but more victims per incident. Most incidents had one victim; however, four incidents had three or more fatalities. Victims were mostly male, and 67 percent were older than the age of 50. White victims accounted for more than half of all victims, followed by black victims at 43 percent. Victims were typically found in residences, specifically single-family dwellings and mobile homes.

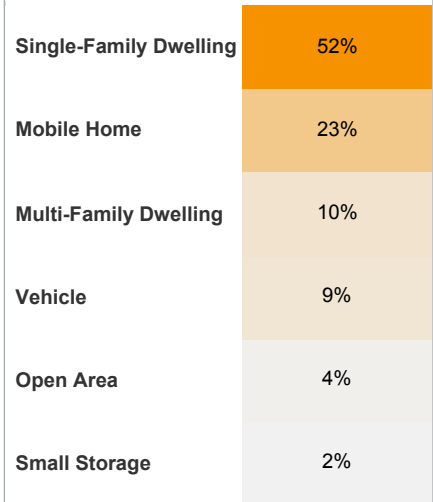
Victim Gender



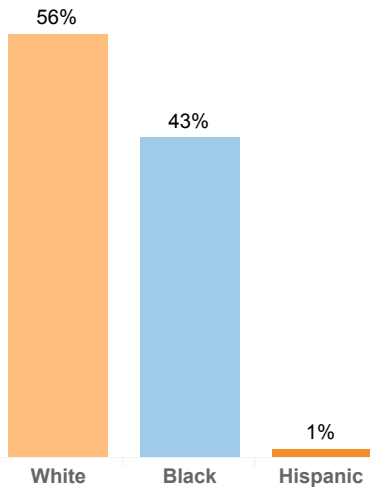
Incidents and Victims per County

County	Incidents	Victims
Abbeville	1	1
Aiken	4	6
Allendale	1	1
Anderson	5	5
Beaufort	1	1
Berkeley	2	4
Charleston	1	1
Cherokee	1	1
Chester	1	1
Clarendon	1	1
Colleton	3	3
Dillon	4	5
Dorchester	2	2
Edgefield	1	1
Fairfield	1	1
Florence	6	7
Georgetown	2	2
Greenville	4	5
Greenwood	2	2
Horry	4	4
Kershaw	1	1
Lancaster	4	4
Laurens	2	2
Lee	1	1
Lexington	1	1
Marion	3	6
McCormick	1	4
Orangeburg	6	8
Pickens	2	2
Richland	4	4
Spartanburg	2	2
Sumter	4	4
Williamsburg	2	2
York	1	1
Grand Total	81	96

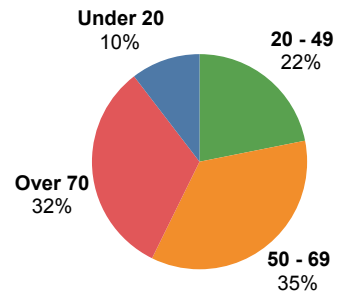
Occupancy Type



Victim Race



Victim Age



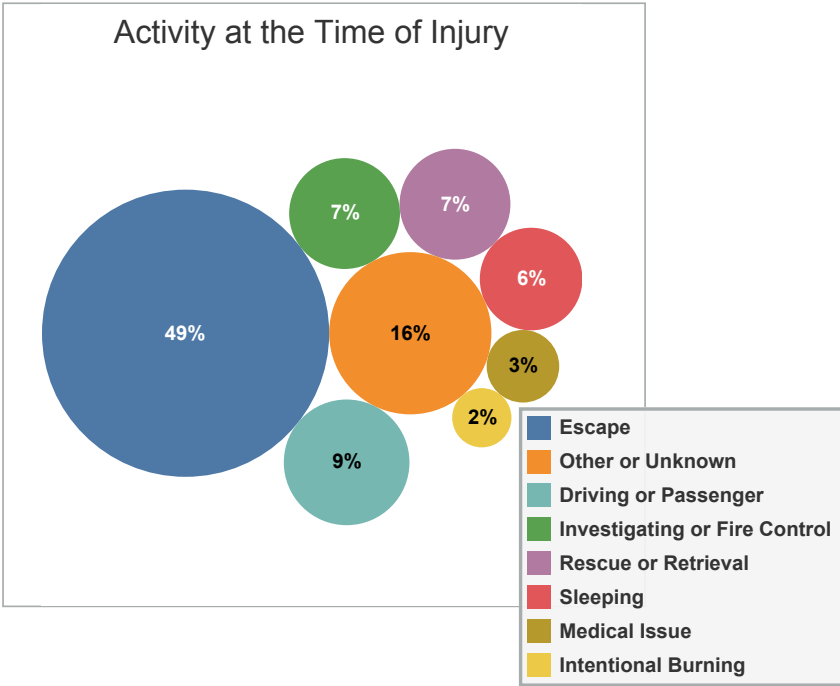
Median Age of Victims = 61

Multiple Fatality Incidents

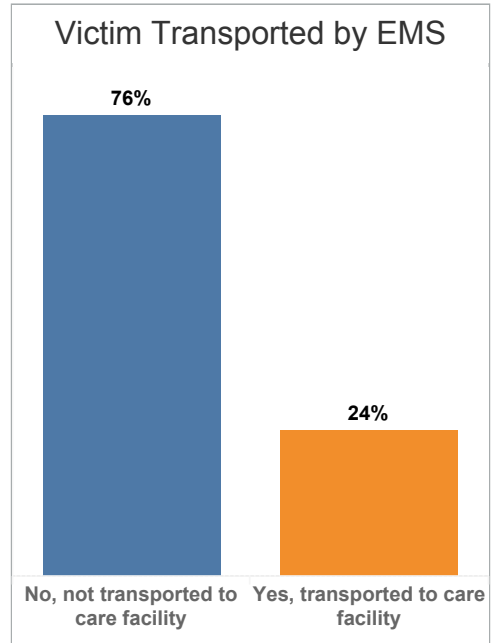


Fire Fatality Victim Profile

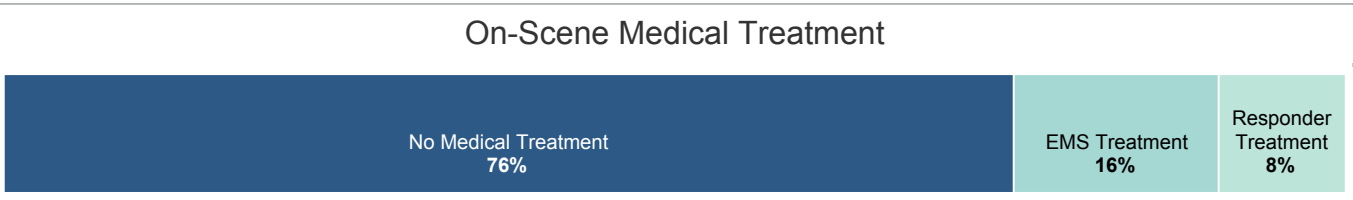
Activity at the Time of Injury



Victim Transported by EMS



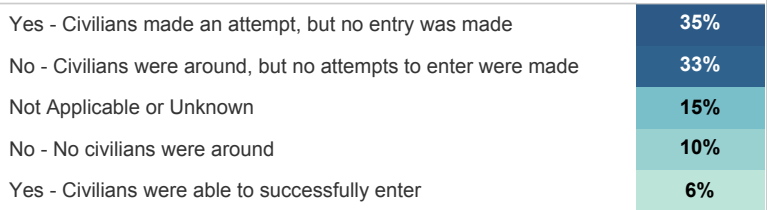
On-Scene Medical Treatment



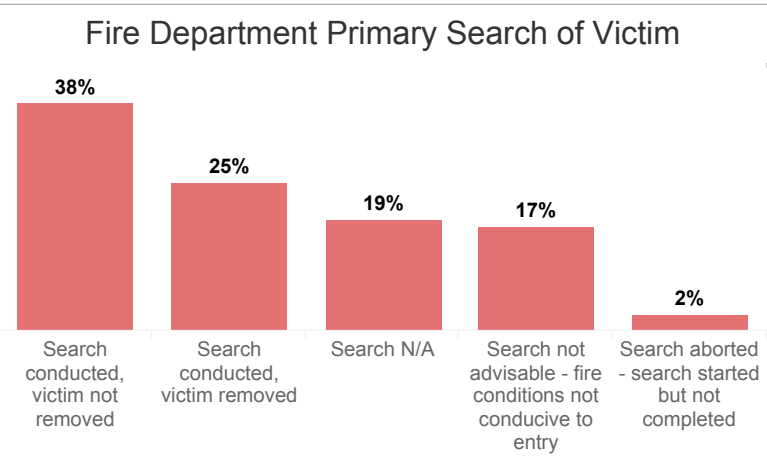
Victims were generally found to be attempting escape when they were injured. Forty-nine percent of victims attempted an escape, while only four percent of victims were successful in their attempt. Six percent did not awaken to an emergency before succumbing. In three out of four cases, the victim was pronounced deceased at the fire scene. In 40 cases (42%), citizens attempted to rescue victims. Prior to fire department arrival, unsafe conditions did not allow for citizens to assist the victim in escaping. In 16 percent of cases, the fire department could not search for the victim due to conditions. Victims were only removed during search and rescue operations in one out of every four fatal fires.

The CLEAR Team was notified about fire fatalities within 24 hours of the death 84 percent of the time, and responded on-scene 53 percent of the time. This response allows us to understand more about why some fires are fatal and connect with fire departments and their communities to prevent further tragedies.

Civilian Entry Attempt



Fire Department Primary Search of Victim

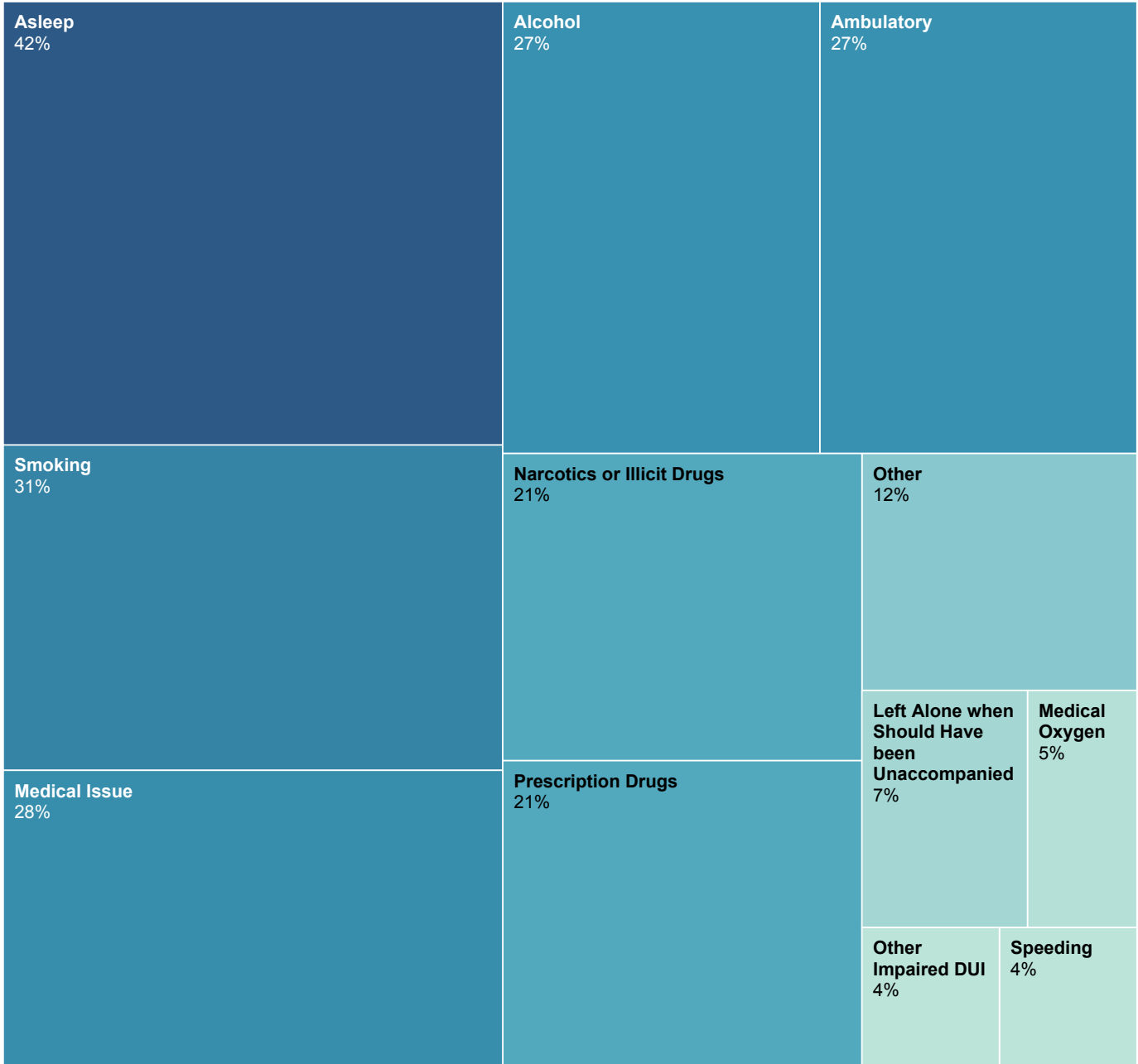


Human Factors Profile

Human factors were deemed present in 82 percent of all incidents, with 56 percent of incidents having more than one human factor present. The human factors below account for some of the factors seen in this year's incidents. An inability to be notified of an emergency, an inability to go to a safe area, and risky behaviors contributed to a person's demise in the event of a fire.

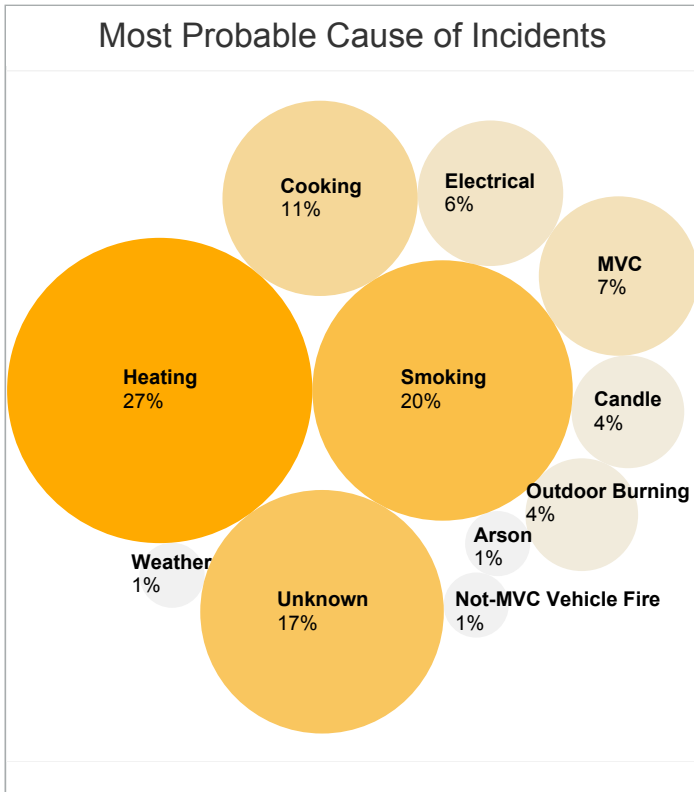
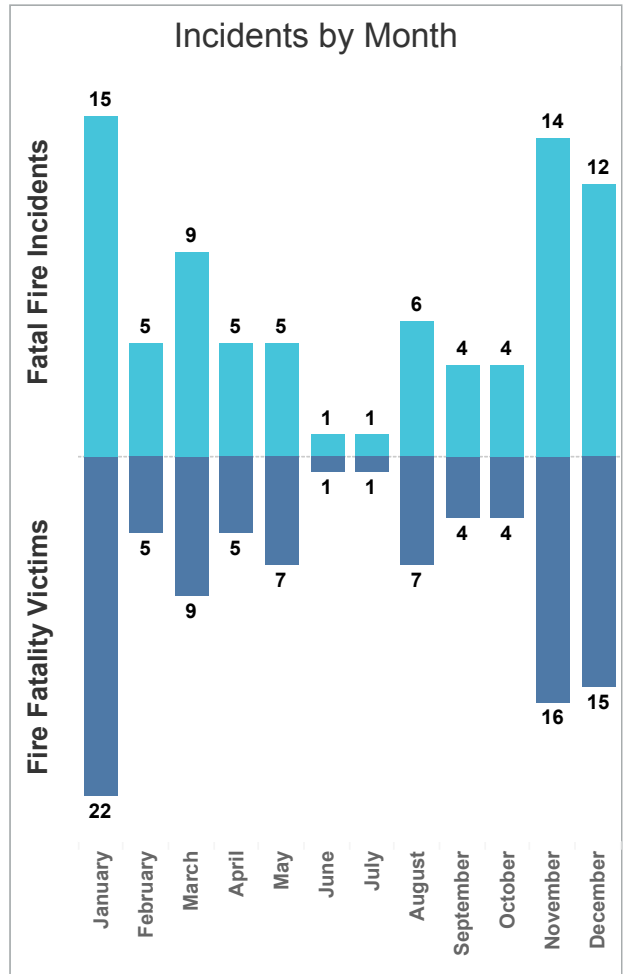
Eighty-three percent of vehicle-related and one-hundred percent of open area-related fire fatalities had at least one human factor which contributed to an improper response to the emergency.

Four incidents had medical oxygen as a known human factor, and one-hundred percent of those incidents had smoking as an additional human factor present.



Fatal Incidents Profile

When cause could be determined, fatal incidents were most likely caused by improperly discarded smoking materials, unattended cooking, or malfunctioning or improperly-used heaters. Incidents occurred on all days of the week, with an above average amount on Sunday and Monday. Fatal incidents generally occurred during overnight hours, from 9 p.m. to 6 a.m., and in January, November, and December.

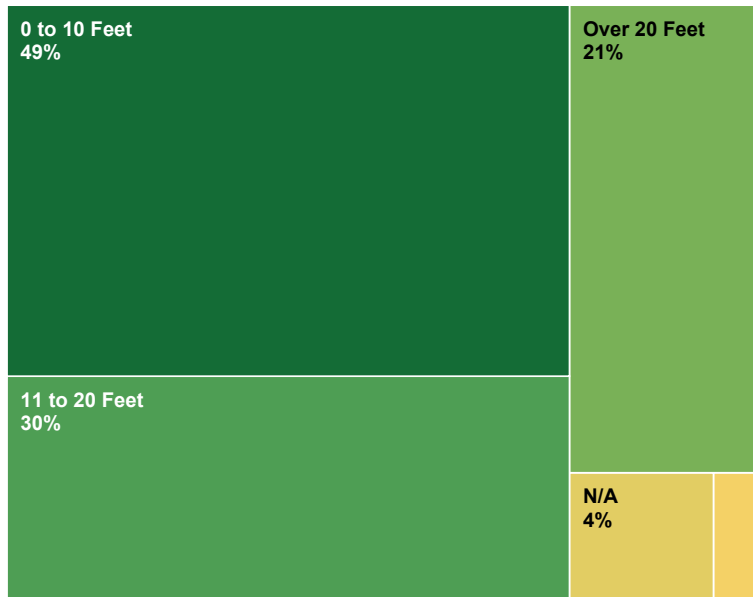


Days and Times of Incidents Occurring

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Grand Total
12 AM to 3 AM	3	2	2	1	1	2	2	13
3 AM to 6 AM	4	3	2		1	4	3	17
6 AM to 9 AM	1		2	4	1		3	11
9 AM to 12 PM			2	2	1	1	1	7
12 PM to 3 PM	2		1	1	2	1	1	8
3 PM to 6 PM		2	1		1	1		5
6 PM to 9 PM		1	1	2	1		1	6
9 PM to 12 PM		3	2	2		4	3	14
Grand Total	10	11	13	12	8	13	14	81

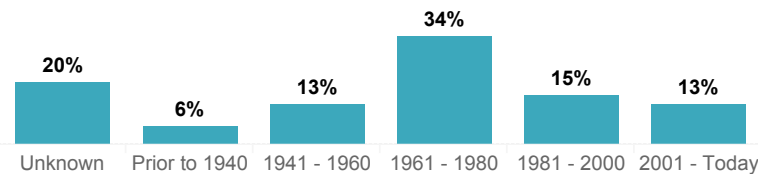
Homes with Fatal Incidents Profile

Victim's Distance from an Egress

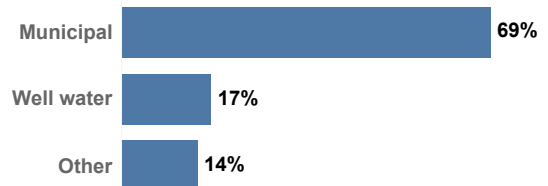


Eighty-eight percent of fatal fires occurred in residences. These homes, which are mostly owned, tend to be 30-50 years old, with most being smaller than 1,500 square feet. These homes are often supplied with city or municipal water. Smoke alarms were not always determined to be present, and if they were (33% of the time), they did not necessarily alert the occupants to an emergency. Only in four percent of fatal fires did an alarm that was present also alert the occupants. Notification by an alarm saved two occupants in two separate fires. Code and safety issues were present in 79 percent of incidents, with 46 percent of incidents having more than one issue present. Incidents where it was known the home did not have any smoke alarms present occurred 41 percent of the time.

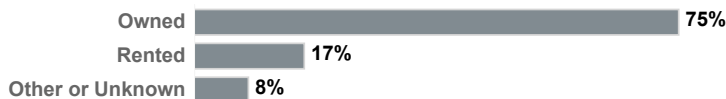
Age of Homes



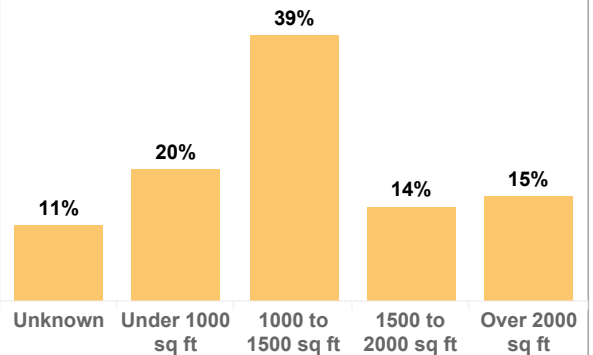
Water Source



Ownership Status of Homes



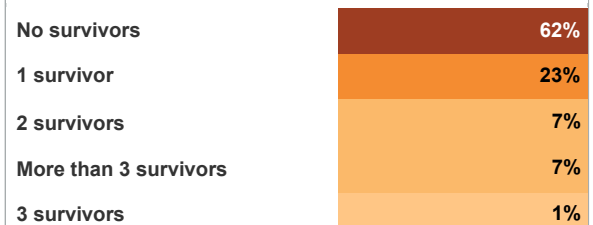
Size of Homes



Known Code & Safety Issues

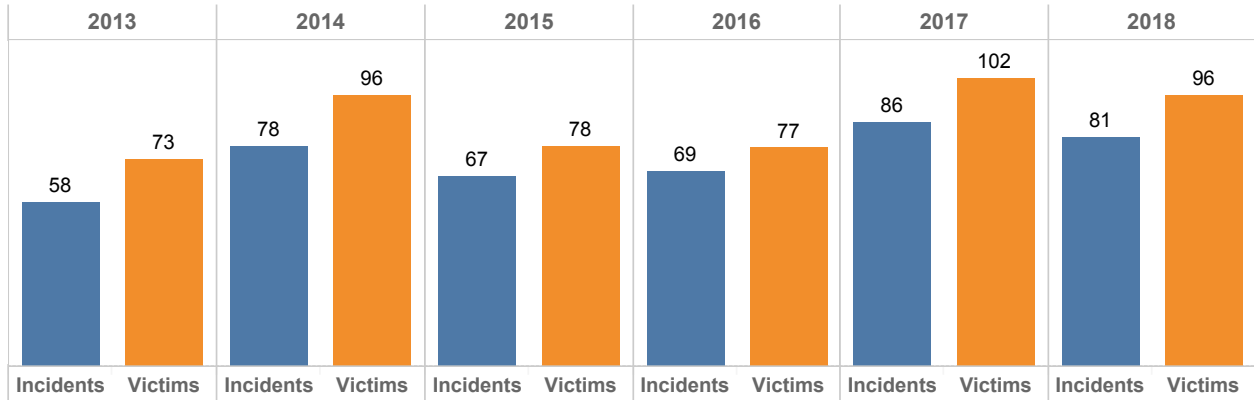
No Smoke Alarms	41%
Hoarding Conditions	22%
Block Exits	21%
Derelict Conditions	20%
Issues with the Egress	14%
Improper Storage of Materials	14%
Trip Hazards	12%
Electrical Risk	12%
Poor Construction	11%
No Power to Property	1%

Survivors in Fatal Home Incidents



Annual and Historical Fire Fatality Information

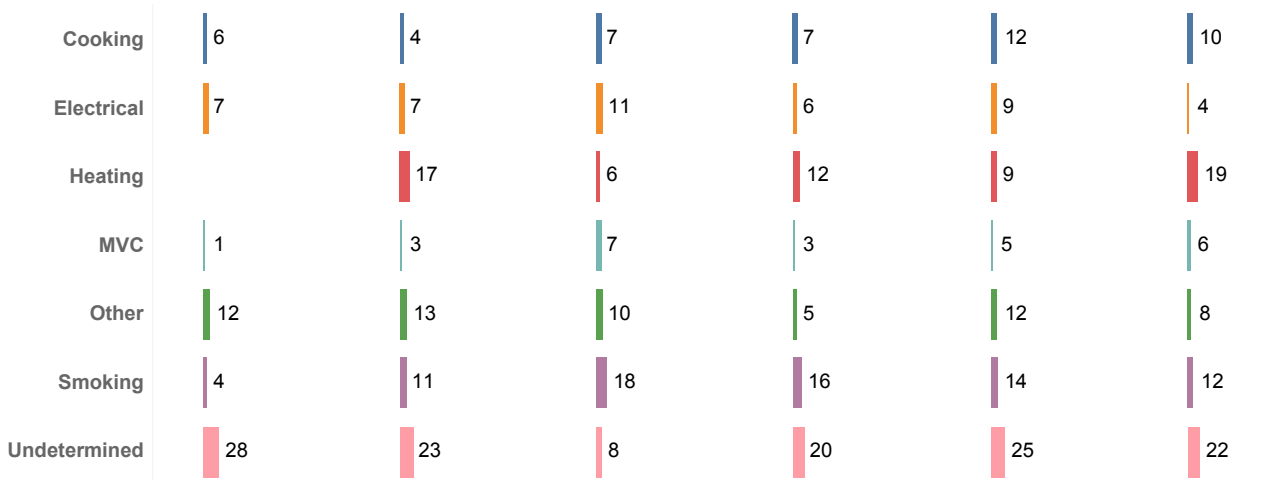
Number of Fatal Incidents and Fire Death Victims from 2013-2018



Fire deaths and fatal fires have increased steadily over the past five years. In 2013-2017, the average number of fire victims per year is 85. During the same time frame, the average number of fatal fires per year is 70. There is a 13 percent increase in fire deaths in 2018 compared to the average of the past five years. There is a 16 percent increase in fatal fires in 2018 compared to the average of the past five years. While it is unknown what is responsible for this increase in fire deaths and fatal fires, one possibility is there is better reporting by fire departments when this situation happens.

From 2013 to 2018, the number of "undetermined" cause of incidents decreased as researchers were better able to attribute a most probable cause. One cause of fatal fires that drastically increased from 2013 to 2018 was heating, from no fires to 19 fires.

Most Probable Cause of Fatal Fires from 2013-2018



*Other = Arson, Weather, Explosions, Suicide, Outdoor Burning, Playing with a Heat Source, and Unattended Candle

Detailed Fatality Information

January

Incident Date	County	Most Probable Cause	Occupancy	Age	Gender	Race
1/3/18	Anderson	Smoking	Single-Family Dwelling	62	Male	White
1/4/18	Williamsburg	Heating	Mobile Home	51	Male	White
1/5/18	Lee	Heating	Single-Family Dwelling	84	Female	Black
1/6/18	Richland	Candle	Multi-Family Dwelling	70	Male	White
1/7/18	Berkeley	Heating	Mobile Home	69	Male	Black
				79	Female	Black
1/8/18	McCormick	Heating	Mobile Home	1	Male	White
				3	Female	White
				4	Male	White
				25	Male	White
1/9/18	Lancaster	Outdoor Burning	Open Area	79	Male	White
1/10/18	Clarendon	Heating	Mobile Home	65	Male	Black
1/12/18	Greenwood	Smoking	Single-Family Dwelling	48	Male	White
1/14/18	Dillon	Cooking	Single-Family Dwelling	74	Male	White
				79	Female	White
1/16/18	Williamsburg	Heating	Single-Family Dwelling	86	Male	Black
1/24/18	Marion	Candle	Single-Family Dwelling	53	Male	Black
				67	Male	Black
1/25/18	Greenville	Outdoor Burning	Open Area	56	Male	White
1/26/18	Florence	Heating	Single-Family Dwelling	52	Female	Black
				62	Male	Black
1/29/18	Orangeburg	Heating	Single-Family Dwelling	62	Male	Black

February

Incident Date	County	Most Probable Cause	Occupancy	Age	Gender	Race
2/2/18	Colleton	Undetermined	Single-Family Dwelling	70	Male	White
2/7/18	Laurens	Heating	Single-Family Dwelling	59	Female	Black
2/9/18	Florence	Electrical	Mobile Home	38	Male	Black
2/20/18	Anderson	Smoking	Mobile Home	45	Female	White
2/22/18	Anderson	Smoking	Mobile Home	65	Female	White

March

Incident Date	County	Most Probable Cause	Occupancy	Age	Gender	Race
3/4/18	Florence	Candle	Single-Family Dwelling	50	Male	Black
3/7/18	Florence	Cooking	Multi-Family Dwelling	36	Female	White
3/12/18	Colleton	Heating	Single-Family Dwelling	86	Female	Black
3/13/18	Dillon	Heating	Single-Family Dwelling	78	Female	Black
3/16/18	Richland	MVC	Vehicle	16	Male	Black
3/24/18	Aiken	Undetermined	Single-Family Dwelling	26	Male	White
3/25/18	Chester	Electrical	Small Storage	61	Male	White
3/31/18	Allendale	Heating	Single-Family Dwelling	5	Male	Black
	Kershaw	Cooking	Single-Family Dwelling	72	Female	White

April

Incident Date	County	Most Probable Cause	Occupancy	Age	Gender	Race
4/9/18	Anderson	Smoking	Mobile Home	36	Female	White
	Spartanburg	Cooking	Single-Family Dwelling	25	Female	White
4/14/18	Greenville	Undetermined	Single-Family Dwelling	87	Female	White
4/16/18	Richland	Undetermined	Single-Family Dwelling	86	Male	White
4/22/18	Dorchester	MVC	Vehicle	20	Female	White

May

Incident Date	County	Most Probable Cause	Occupancy	Age	Gender	Race
5/2/18	Dillon	Undetermined	Single-Family Dwelling	69	Male	White
5/5/18	Charleston	Smoking	Single-Family Dwelling	75	Male	Black
5/7/18	Orangeburg	MVC	Vehicle	2	Female	White
				4	Male	White
				24	Female	White
5/10/18	Greenwood	Undetermined	Single-Family Dwelling	76	Female	White
5/12/18	Colleton	Smoking	Single-Family Dwelling	65	Male	White

June

Incident Date	County	Most Probable Cause	Occupancy	Age	Gender	Race
6/4/18	Florence	Smoking	Mobile Home	74	Male	White

July

Incident Date	County	Most Probable Cause	Occupancy	Age	Gender	Race
7/28/18	Sumter	Undetermined	Multi-Family Dwelling	27	Male	Hispanic

August

Incident Date	County	Most Probable Cause	Occupancy	Age	Gender	Race
8/8/18	Aiken	Weather	Single-Family Dwelling	101	Female	Black
	Berkeley	Smoking	Single-Family Dwelling	72	Female	White
				80	Male	White
8/10/18	Pickens	Undetermined	Single-Family Dwelling	66	Male	White
8/14/18	Georgetown	Smoking	Single-Family Dwelling	60	Male	White
8/28/18	Spartanburg	Electrical	Mobile Home	30	Male	Black
8/31/18	Anderson	Cooking	Single-Family Dwelling	58	Male	Black

September

Incident Date	County	Most Probable Cause	Occupancy	Age	Gender	Race
9/8/18	Marion	Cooking	Multi-Family Dwelling	29	Female	Black
9/24/18	Aiken	Other Vehicle Fires (Not ..	Vehicle	43	Male	White
9/29/18	York	Cooking	Single-Family Dwelling	35	Female	Black
9/30/18	Laurens	Undetermined	Mobile Home	57	Female	White

October

Incident Date	County	Most Probable Cause	Occupancy	Age	Gender	Race
10/2/18	Sumter	MVC	Vehicle	44	Female	White
10/20/18	Horry	Smoking	Single-Family Dwelling	88	Male	White
10/26/18	Sumter	Smoking	Single-Family Dwelling	70	Male	Black
10/27/18	Dillon	Arson	Single-Family Dwelling	18	Male	Black

November

Incident Date	County	Most Probable Cause	Occupancy	Age	Gender	Race
11/4/18	Lancaster	Heating	Mobile Home	51	Male	White
11/6/18	Lancaster	MVC	Vehicle	20	Male	Black
11/16/18	Edgefield	Smoking	Mobile Home	58	Male	White
11/18/18	Beaufort	Outdoor Burning	Open Area	71	Male	White
	Orangeburg	Undetermined	Single-Family Dwelling	61	Male	Black
11/21/18	Greenville	Heating	Single-Family Dwelling	52	Female	Black
	Pickens	Heating	Small storage	61	Male	White
11/22/18	Fairfield	Smoking	Single-Family Dwelling	70	Male	Black
11/23/18	Abbeville	Smoking	Single-Family Dwelling	58	Female	Black
	Orangeburg	MVC	Vehicle	24	Male	Black
11/28/18	Georgetown	Smoking	Multi-Family Dwelling	68	Male	White
	Horry	Heating	Mobile Home	78	Male	Black
11/29/18	Aiken	Electrical	Mobile Home	67	Male	White
				69	Male	White
				80	Female	White
	Orangeburg	Cooking	Single-Family Dwelling	4	Female	White

December

Incident Date	County	Most Probable Cause	Occupancy	Age	Gender	Race
12/1/18	Greenville	Electrical	Mobile Home	9	Male	Black
				51	Male	Black
12/2/18	Lexington	Undetermined	Mobile Home	52	Male	White
12/8/18	Orangeburg	Heating	Single-Family Dwelling	72	Male	White
12/11/18	Florence	Undetermined	Mobile Home	72	Female	White
12/18/18	Horry	Cooking	Mobile Home	69	Female	Black
	Lancaster	Heating	Single-Family Dwelling	85	Male	Black
12/20/18	Richland	Undetermined	Multi-Family Dwelling	44	Female	Black
12/24/18	Cherokee	Heating	Single-Family Dwelling	85	Male	White
	Marion	Heating	Multi-Family Dwelling	44	Female	Black
				55	Female	Black
				70	Male	Black
12/25/18	Horry	Heating	Multi-Family Dwelling	69	Male	Black
	Sumter	Heating	Single-Family Dwelling	33	Male	White
12/28/18	Dorchester	Undetermined	Single-Family Dwelling	73	Female	White